

ABSTRACT

Mung bean plants are a type of food crop that is in great demand by the Indonesian people in terms of its development, there are problems such as the lack of use of superior varieties and low levels of soil fertility, so solutions to these problems are needed. The use of superior varieties and the use of organic materials such as bamboo leaf compost is one solution that can be used to sustain mung bean production. The objective of this study was to determine the effect of different varieties and the application of bamboo leaf compost fertilizer on the growth and production of mung bean plants. This research was conducted at the Agroecotechnology Experimental Garden and Laboratory of the Faculty of Agriculture, Malikussaleh University in November 2024 to January 2025 using a two-factor randomized group design (RAK). The first factor is green mung bean variety (V) which consists of V1 = Vima-1, V2 = Vima-3 and V3 = Vima-4. The second factor is bamboo leaf compost fertilizer (K) which consists of K0 = control, K1 = 100g/plant, K2 = 150g/plant, K3 = 200g/plant. The use varieties affected the variables of plant height, stem diameter 21 HST, chlorophyll content, relative growth rate 21-28 HST, pod length, flowering age, number of filled pods, number of empty pods, 100 seed weight, seed weight per plant, seed weight per plot and production per ha. The application of bamboo leaf compost affected the variables of stem diameter 35 HST and number of productive branches. There was an interaction effect between the use of multiple varieties and the application of bamboo leaf compost on the variables of stem diameter at 35 HST, relative growth rate 28-35 HST, pod length, seed weight per plot and production per ha.

Keywords : *Organic, Legumes, Production, Varieties*